Notice of Allowability	Application No.	Applicant(s)
	10/731,989	SAMPSELL ET AL.
	Examiner	Art Unit
	William C. Choi	2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendment filed 6/27/2005*.

2. ☒ The allowed claim(s) is/are *1-26,32 and 33*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 0405, 0405, 0505
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Georgia Epps
Supervisory Patent Examiner
Technology Center 2800

Allowed Claims: 1-26, 32 and 33.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically, with respect to independent claim 1, none of the prior art alone or in combination disclose or teach of a light modulator comprising an array comprised of rows and columns of interferometric display elements, each divided into sub-rows of sub-elements as claimed, specifically comprising sub-array connection lines electrically connected to each array connection line, and switches to transmit the operating signals from each array connection line to the sub-rows to effect gray scale modulation.

Specifically, with respect to independent claim 8, none of the prior art alone or in combination disclose or teach of a method of manufacturing an interferometric light modulator comprising providing an array of interferometric display elements arranged in rows and columns as claimed, specifically wherein each element comprises a predetermined number of sub-rows depending upon a desired bit-depth for a display and a predetermined number of sub-columns corresponding to a desired number of colors for the display.

Specifically, with respect to independent claim 14, none of the prior art alone or in combination disclose or teach of a light modulator comprising an array of interferometric display elements arranged in rows and columns comprising an array

connection line electrically connected to a sub-element in each display element as claimed, specifically wherein at least one sub-element is configured to selectively form an electrical connection connecting said array connection line to at least one other sub-element.

Specifically, with respect to independent claim 15, none of the prior art alone or in combination disclose or teach of a light modulator comprising an array of interferometric display elements arranged in rows and columns comprising sub-elements as claimed, specifically comprising a predetermined number of sub-element cascades within each display element, wherein the predetermined number corresponds to the number of colors in the element.

Specifically, with respect to independent claim 16, none of the prior art alone or in combination disclose or teach of a light modulator comprising an array of interferometric display elements arranged in rows and columns comprising sub-elements as claimed, specifically comprising addressing circuitry to provide an addressing pulse to each sub-element cascade, wherein a number of sub-elements in the cascade that become active depends upon a length of the addressing pulse.

Specifically, with respect to independent claim 17, none of the prior art alone or in combination disclose or teach of a method of manufacturing a light modulator comprising providing an array of interferometric display elements, each comprising at least one sub-element cascade as claimed, specifically such that at least one sub-element is configured to selectively form an electrical connection connecting said array connection line to at least one other sub-element and electrically connecting a first

element in each sub-element cascade in a row to a corresponding connection line for that row.

Specifically, with respect to independent claim 18, none of the prior art alone or in combination disclose or teach of a method of manufacturing a light modulator comprising providing an array of interferometric display elements arranged in rows and columns as claimed, specifically comprising providing an array of interferometric elements having at least one sub-element cascade further comprising providing a sub-element cascade for each desired color.

Specifically, with respect to independent claim 20, none of the prior art alone or in combination disclose or teach of a light modulator comprising an array of interferometric elements, each comprising a pre-determined number of sub-elements as claimed, specifically wherein each sub-element comprises a single movable layer having a surface area corresponding to a different binary weight of display information and wherein the number of sub-elements depends upon a desired bit depth.

Specifically, with respect to independent claim 23, none of the prior art alone or in combination disclose or teach of a light modulator comprising an array of interferometric elements, each comprising a pre-determined number of sub-elements as claimed, specifically wherein one or more of the sub-elements are of a different size corresponding to a different binary weight of display information, wherein the number of sub-elements depend upon a desired bit depth and one connection line for each display element and a set of switches electrically connected between the display element and the sub-elements.

Specifically, with respect to independent claim 24, none of the prior art alone or in combination disclose or teach of a method of manufacturing a light modulator comprising providing an array of interferometric display elements and forming sub-elements within each display element of a size approximately equal to one half the display element as claimed, specifically further comprising forming additional sub-elements, each having a movable layer having a surface area approximately equal to half the surface area of the next largest movable layer of another sub-element.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (571) 272-2324. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

W.C

William Choi
Patent Examiner
Art Unit 2873
September 13, 2005

Georgia Epps
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